We Claim:

1. A method of preparing a therapeutic composition comprising a targeting moiety that specifically binds to a cell surface component that promotes active transport, endocytosis or transcytosis, and a therapeutic moiety, comprising:

physically entrapping (i) a portion of said targeting moiety, or an anchor moiety that binds to said targeting moiety, and (ii) said therapeutic moiety, within a particle having physical dimensions compatible with cellular uptake, whereby said particle is adapted to specifically bind to said cell surface component.

2. A method according to claim 1, wherein said cell surface component is present on epithelial cells.

3. A method according to claim 2, wherein said epithelial cells are enterocytes.

4. A method according to claim 1, wherein said cell surface component is present on endothelial cells.

5. A method according to claim 1, wherein said targeting moiety and said therapeutic moiety are not bound to one another.

6. A method according to claim 1, wherein said targeting moiety and said therapeutic moiety are covalently or noncovalently bound to one another.

7. A method according to claim 1, wherein said targeting moiety is selected from the group consisting of a polypeptide, a recombinant polypeptide, an antibody, an antibody fragment, a single-chain variable region fragment, a small molecule, an oligonucleotide, an oligosaccharide, a polysaccharide, a cyclic polypeptide, a peptidomimetic, and an aptamer.

8. A method according to claim 1, wherein said cell surface component is selected from the group consisting of pIgR, transferrin receptor, vitamin B12 receptor, FcRn, an integrin, Flt-1, Flk-1, Flt-4, and low density lipoprotein receptor.

9. A method according to claim 1, wherein said therapeutic moiety is selected from the group consisting of a polypeptide, a recombinant polypeptide, an antibody, an antibody fragment, a single-chain variable region fragment, a small molecule, an oligonucleotide, an oligosaccharide, a polysaccharide, a cyclic polypeptide, a peptidomimetic, and an aptamer.

10. A method according to claim 1, wherein upon said physical entrapment, said anchor moiety comprises a first region entrapped within said particle and a second region protruding from the surface of said particle for binding to said targeting moiety.

11. A method according to claim 10, wherein said first region is selected from the group consisting of a polypeptide, a recombinant polypeptide, a nucleic acid, a poly(ethylene oxide), a peptidomimetic, a cyclic peptide, a oligosaccharide, a polysaccharide, and a dextran.

12. A method according to claim 10, wherein said second region is selected from the group consisting of a polypeptide, an antibody, an antibody fragment, a single-chain variable region fragment, a small molecule, an oligonucleotide, an oligosaccharide, a polysaccharide, a cyclic polypeptide, a peptidomimetic, and an aptamer.

13. A method according to claim 12, wherein said second region is a polypeptide sequence that forms a coiled-coil with a complementary polypeptide sequence on said targeting moiety.

14. A method according to claim 1, wherein upon said physical entrapment, said targeting moiety comprises a first region entrapped within said particle and a second region protruding from the surface of said particle that specifically binds to said cell surface component.

15. A method according to claim 14, wherein during said physical entrapment step, said particle comprises pores having physical dimensions capable of accepting said first region, but incapable of accepting said second region.

16. A method according to claim 15, wherein said pores are produced by swelling said particle, and wherein said targeting moiety is entrapped by reducing said swelling.

17. A method according to claim 1, wherein said therapeutic moiety is entrapped within said particle by polymerization of material forming said particle.

18. A method according to claim 1, wherein said portion of said targeting moiety, or said anchor moiety, is entrapped within said particle by polymerization of material forming said particle.

19. A method according to claim 1, wherein said portion of said targeting moiety, or said anchor moiety, and said therapeutic moiety are entrapped within said particle by polymerization of material forming said particle.

20. A method according to claim 6, wherein upon said physical entrapment, said therapeutic moiety is entrapped within said particle and all or a portion of said targeting moiety is protruding from the surface of said particle.

21. A method of delivering a therapeutic composition to a subject in need thereof, comprising:

delivering a particle to said subject, said particle comprising (i) a targeting moiety that specifically binds to a cell surface component that promotes endocytosis or transcytosis, and (ii) a therapeutic moiety, wherein said targeting moiety, or an anchor moiety that binds to said targeting moiety, and said therapeutic moiety are physically entrapped within said particle, and wherein said particle has physical dimensions compatible with cellular uptake.

22. A method according to claim 21, wherein said particle is delivered via an oral, nasopharyngeal, oropharyngeal, pulmonary, mucosal, vaginal, or rectal route.

23. A method according to claim 22, wherein said particle protectively retains said therapeutic moiety prior to cellular uptake of said particle.

24. A method according to claim 21, wherein said subject is a human.

25. A method according to claim 21, wherein said cell surface component is present on epithelial cells.

26. A method according to claim 25, wherein said epithelial cells are enterocytes.

27. A method according to claim 21, wherein said cell surface component is present on endothelial cells.

28. A method according to claim 21, wherein said targeting moiety and said therapeutic moiety are not bound to one another.

29. A method according to claim 21, wherein said targeting moiety and said therapeutic moiety are covalently or noncovalently bound to one another.

30. A method according to claim 21, wherein said targeting moiety is selected from the group consisting of a polypeptide, a recombinant polypeptide, an antibody, an antibody fragment, a single-chain variable region fragment, a small molecule, an oligonucleotide, an oligosaccharide, a polysaccharide, a cyclic polypeptide, a peptidomimetic, and an aptamer.

31. A method according to claim 21, wherein said cell surface component is selected from the group consisting of pIgR, transferrin receptor, vitamin B12 receptor, FcRn, an integrin, Flt-1, Flk-1, Flt-4, and low density lipoprotein receptor.

32. A method according to claim 21, wherein said therapeutic moiety is selected from the group consisting of a polypeptide, a recombinant polypeptide, an antibody, an antibody fragment, a single-chain variable region fragment, a small molecule, an oligonucleotide, an oligosaccharide, a polysaccharide, a cyclic polypeptide, a peptidomimetic, and an aptamer.

33. A method according to claim 21, wherein upon said physical entrapment, said anchor moiety comprises a first region entrapped within said particle and a second region protruding from the surface of said particle for binding to said targeting moiety.

34. A method according to claim 33, wherein said first region is selected from the group consisting of a polypeptide, a recombinant polypeptide, a nucleic acid, a poly(ethylene oxide), a peptidomimetic, a cyclic peptide, a oligosaccharide, a polysaccharide, and a dextran.

35. A method according to claim 33, wherein said second region is selected from the group consisting of a polypeptide, an antibody, an antibody fragment, a single-chain variable region fragment, a small molecule, an oligonucleotide, an oligosaccharide, a polysaccharide, a cyclic polypeptide, a peptidomimetic, and an aptamer.

36. A method according to claim 35, wherein said second region is a polypeptide sequence that forms a coiled-coil with a complementary polypeptide sequence on said targeting moiety.

37. A method according to claim 21, wherein upon said physical entrapment, said targeting moiety comprises a first region entrapped within said particle and a second region protruding from the surface of said particle that specifically binds to said cell surface component.

38. A method according to claim 37, wherein during said physical entrapment step, said particle comprises pores having physical dimensions capable of accepting said first region, but incapable of accepting said second region.

39. A method according to claim 38, wherein said pores are produced by swelling said particle, and wherein said targeting moiety is entrapped by reducing said swelling.

40. A method according to claim 21, wherein said therapeutic moiety is entrapped within said particle by polymerization of material forming said particle.

41. A method according to claim 21, wherein said portion of said targeting moiety, or said anchor moiety, is entrapped within said particle by polymerization of material forming said particle.

42. A method according to claim 21, wherein said portion of said targeting moiety, or said anchor moiety, and said therapeutic moiety are entrapped within said particle by polymerization of material forming said particle.

43. A method according to claim 27, wherein upon said physical entrapment, said therapeutic moiety is entrapped within said particle and all or a portion of said targeting moiety is protruding from the surface of said particle.

44. A particle comprising a targeting moiety that specifically binds to a cell surface component that promotes active transport, endocytosis or transcytosis, and a therapeutic moiety, wherein said targeting moiety, or an anchor moiety that binds to said targeting moiety, and said therapeutic moiety are physically entrapped within said particle, and wherein said particle has physical dimensions compatible with cellular uptake.

45. A particle according to claim 44, wherein said targeting moiety and said therapeutic moiety are not bound to one another.

46. A particle according to claim 44, wherein said targeting moiety and said therapeutic moiety are covalently or noncovalently bound to one another.

47. A particle according to claim 44, wherein said targeting moiety is selected from the group consisting of a polypeptide, a recombinant polypeptide, an antibody, an antibody fragment, a single-chain variable region fragment, a small molecule, an oligonucleotide, an oligosaccharide, a polysaccharide, a cyclic polypeptide, a peptidomimetic, and an aptamer.

48. A particle according to claim 44, wherein said cell surface component is selected from the group consisting of pIgR, transferrin receptor, vitamin B12 receptor, FcRn, an integrin, Flt-1, Flk-1, Flt-4, and low density lipoprotein receptor.

49. A particle according to claim 44, wherein said therapeutic moiety is selected from the group consisting of a polypeptide, a recombinant polypeptide, an antibody, an antibody fragment, a single-chain variable region fragment, a small molecule, an oligonucleotide, an oligosaccharide, a polysaccharide, a cyclic polypeptide, a peptidomimetic, and an aptamer.

50. A particle according to claim 44, wherein upon said physical entrapment, said anchor moiety comprises a first region entrapped within said particle and a second region protruding from the surface of said particle for binding to said targeting moiety.

51. A particle according to claim 50, wherein said first region is selected from the group consisting of a polypeptide, a recombinant polypeptide, a nucleic acid, a poly(ethylene oxide), a peptidomimetic, a cyclic peptide, a oligosaccharide, a polysaccharide, and a dextran.

52. A particle according to claim 50, wherein said second region is selected from the group consisting of a polypeptide, an antibody, an antibody fragment, a single-chain variable region fragment, a small molecule, an oligonucleotide, an oligosaccharide, a polysaccharide, a cyclic polypeptide, a peptidomimetic, and an aptamer.

53. A particle according to claim 52, wherein said second region is a polypeptide sequence that forms a coiled-coil with a complementary polypeptide sequence on said targeting moiety.

54. A particle according to claim 44, wherein upon said physical entrapment, said targeting moiety comprises a first region entrapped within said particle and a second region protruding from the surface of said particle that specifically binds to said cell surface component.

55. A particle according to claim 54, wherein during said physical entrapment step, said particle comprises pores having physical dimensions capable of accepting said first region, but incapable of accepting said second region.

56. A particle according to claim 55, wherein said pores are produced by swelling said particle, and wherein said targeting moiety is entrapped by reducing said swelling.

57. A particle according to claim 44, wherein said therapeutic moiety is entrapped within said particle by polymerization of material forming said particle.

58. A particle according to claim 44, wherein said portion of said targeting moiety, or said anchor moiety, is entrapped within said particle by polymerization of material forming said particle.

59. A particle according to claim 44, wherein said portion of said targeting moiety, or said anchor moiety, and said therapeutic moiety are entrapped within said particle by polymerization of material forming said particle.

60. A particle according to claim 46, wherein upon said physical entrapment, said therapeutic moiety is entrapped within said particle and all or a portion of said targeting moiety is protruding from the surface of said particle.